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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/747,945

Applicant(s)

PARK, SE WOONG

Examiner

DANIEL M. PASIEWICZ

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-12, 20 and 22-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-12, 20 and 22-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 8/25/2009 have been fully considered but they are not persuasive.
2. With respect to **claims 1 and 20** Applicant argues Sasaki does not disclose or suggest the limitations of claim 1 and 20 as the claims have "been amended to recites, *inter alia*, a driving barrel configured to support a single alignment of at least two lenses configured to serve as a wide-angle lens at all times, wherein the at least two lenses are respectively fixed to a predetermined position of the driving barrel so that an interval between any two lenses in the single alignment of the at least two lenses is immutable, and a moving device comprising a single drive motor configured to reciprocatingly move the driving barrel to perform both focus and zoom operations at the same time" as Sasaki discloses "[t]he positive lens group L₁ and the negative lens group L₂ are relatively moved forward and backward on the photographing axis O".
3. The Examiner respectfully disagrees with Applicant's arguments. While the Examiner does not disagree that the positive lens group and negative lens group of Sasaki are relatively moved forward and backward the claim is written broadly enough that it requires two or more lenses and "that the interval between any two lenses" is immutable. The Examiner notes that Sasaki discloses that L₁ and L₂ comprise a "first lens group" and "second lens group" respectively, but merely describes the group as being of a positive or negative refracting power (column 5 lines 15-17). Therefore, the Examiner believes Sasaki inherently discloses "that the interval between any two

lenses" of each respective lens group (L_1 or L_2) are immutable with respect to each other as each lens group would comprise a plurality of lenses which are fixed within first holding frame 10 or second holding frame 18 as there would be no need to describe L_1 and L_2 as a "lens group" if they were merely each a single lens that provided the positive or negative refracting power. However, as such inherency could be in question and Sasaki is silent to what actually comprises a "group" the Examiner has updated the rejection of claim 1 below to a 102/103 rejection as warranted by MPEP 2112 as Sasaki at minimum suggests that the first positive lens group L_1 and the negative lens group L_2 could each be made of multiple lenses and it is well known in the art to use multiple lenses to create a single positive or negative refracting power lens group.

4. Claims 2-4, 6-12 and 22-25 are not allowable for at least the reasons disclosed above with respect to claims 1 and 20.
5. In view of Applicant's amendments the objection to claim 10 has been withdrawn.
6. The Examiner notes that any changes made to the interpretation of the references below from the prior rejection are necessitated by Applicant's amendment.

Claim Rejections - 35 USC § 102/103

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-2, 4 and 7-9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. Patent 5,267,085 to Sasaki et al.

10. As stated in the MPEP § 2111.02 (please see also *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 – CCPA 1951), if the preamble of the claim neither recites the limitations of the claim nor is necessary to give life, meaning, and vitality to the claim; then the preamble of the claim is not served to further define the structure of the claim. Thus, in regards to claims 1-11, the preamble of the claim is not given any patentable weight since the preamble of the claim neither recites the limitations of the claim nor is necessary to give life, meaning, and vitality to the claim.

11. With respect to **claim 1 Sasaki** discloses, in Fig. 4, an iris recognition camera, comprising: a driving barrel (Fig. 4) configured to support a single alignment of at least two lenses (lens group L1 and L2) (column 7 line 43 through column 8 line 45; wherein a single alignment comprises moving the lens L1 and L2 to the proper position as indicated by a user determined zoom location through switch 32), configured to serve as a wide-angle lens at all times (column 5 lines 18-22 and column 8 lines 5-11; where the lens system focuses in the telescopic side and wide angle side, thus the lenses are wide angles lenses; additionally, as written the limitation merely states the lens is

configured to serve a wide-angle lens at all times, but it is not required to; as the lenses L1 and L2 are capable of being a wide-angle lens they are also capable of being a wide-angle lens at all times, thus they meet the limitation of the claim), wherein the at least two lenses are respectively fixed to a predetermined position of the driving barrel so that an interval between any two lenses in the single alignment of the at least two lenses is immutable (column 5 lines 15-18 and lines 25-27 and column 6 lines 22-23; where each group is inherently made up of two or more lenses to give a positive or negative refraction and each groups lenses are immutable with respect to each other as they are fixed within the holding frames); a moving device comprising a single drive motor (Mz) configured to reciprocatingly move the driving barrel to perform both focus and zoom operations at the same time (column 5 lines 18-25, lines 32-34 and lines 59-61 and column 6 lines 1-3; where as can be seen in Fig. 4, movement from motor Mz will move both lenses affecting the zoom, which inherently also affects the focal length, thus both a focus and zoom operation are performed at the same time if motor Mz is operated); and a position sensor (22) configured to detect a position of the driving barrel (Fig. 4) within the camera (column 6 lines 29-46; where the magnetic resistance element detects the position of the driving barrel by detecting the position of the first holding frame 10 on the optical axis).

12. While the Examiner has relied upon the lenses groups of Sasaki to inherently comprising more than one lens and the claim to be fully anticipated by Sasaki, even if said lens groups do not inherently comprise more than one lens (which the Examiner does not concede), it would be obvious to one of ordinary skill in the art to use more

then one lens for the groups of Sasaki as positive and negative lens groups comprising more than one lens were well known and expected in the art at the time of Applicant's invention. Such can be evidenced by U.S. Patent 5,353,163 to Shibayama et al and U.S. Patent 5,541,772 to Lin which disclose positive and negative refractive lens groups with multiple lenses in each group (see abstracts).

13. With respect to **claim 2 Sasaki** discloses, in Fig. 4, the iris recognition camera according to claim 1, wherein the moving device comprises: the single drive motor (Mz); a lead screw (2) connected to the motor (Mz) at one end; and a rack (11) coupled to an outer circumference of the lead screw (2).

14. With respect to **claim 4 Sasaki** discloses, in Fig. 4, The iris recognition camera according to claim 1, wherein the driving barrel is provided at one side with a detecting portion (21) configured to communicate with the position sensor (22) so that the position sensor (22) detects a position of the driving barrel (column 6 lines 31-46).

15. With respect to **claim 7 Sasaki** discloses, in Fig. 4, the iris recognition camera according to claim 1, further comprising one or more guide bars (2, 6 and 12) configured to guide the driving barrel during reciprocating movement (column 5 line 23 through column 6 line 30; where the anti rotation bar 6 and lead screws 2 and 12 guide the lenses during reciprocating movement of the driving barrel).

16. With respect to **claim 8 Sasaki** discloses, in Fig. 4, the iris recognition camera according to claim 7, wherein the one or more guide bars (2, 6 and 12) comprises a pair of guide bars (2 and 6), respectively, positioned on opposite sides of the driving barrel (fig. 4).

17. With respect to **claim 9 Sasaki** discloses, in Fig. 4, the iris recognition camera according to claim 1, wherein the position sensor (22) is positioned behind the at least two lenses (Fig. 4; where the sensor 22 can be seen as positioned behind both lens L1 and L2 with respect from the top of body tube 1).

Claim Rejections - 35 USC § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. **Claim 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,267,085 to Sasaki et al.**

20. With respect to **claim 3 Sasaki** discloses an iris recognition camera, comprising: a driving barrel configured to support a lens; a moving device configured to reciprocatingly move the driving barrel to perform both focus and zoom operations; and a position sensor configured to detect a position of the driving barrel within the camera; and wherein the moving device comprises: a motor; a lead screw connected to the motor at one end; and a rack coupled to an outer circumference of the lead screw.

21. **Sasaki** does not expressly disclose wherein the motor comprises a step motor.

22. However, **Official Notice** (MPEP § 2144.03) is taken that both the concepts and advantages of using a step motor in a lens barrel to adjust the lenses are well known and expected in the art. At the time the invention was made, it would have been

obvious to one with ordinary skill in the art to have a step motor as the motors Mz and Mf of **Sasaki** as one of ordinary skill in the lens barrel art would instantly recognize a simple means to accurately control the lens positions through use of a common controller.

23. With respect to **claim 6 Sasaki** discloses, in Fig. 4, the iris recognition camera according to claim 1, wherein the single alignment of the at least two lenses has a focusing distance of 40 mm (column 4 line 60 through column 5 line 2).

24. **Sasaki** does not expressly disclose the focusing distance is 11.8.+ -1 mm.

25. However, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have the focusing distance is 11.8.+ -1 mm, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

26. **Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,267,085 to Sasaki et al in view of U.S. Patent 6,850,631 to Oda et al.**

27. With respect to **claim 10 Sasaki** does not expressly disclose wherein the alignment of the at least two lenses has an image pickup distance range of 20-70cm. However, Oda teaches an iris input device in which the focal length of the lens is fixed at a value within approximately 0.5 to 50 cm (Oda, col. 4 lines .28-29).

28. Therefore, taking the teachings of Sasaki and Oda, it would have been obvious to one of ordinary skill in the art to have a lens system with a pickup distance range of about 20-70 cm in order to get a proper reading of the iris, anything less than 20 cm may cause an inaccurate reading, or cause the eye to come into contact with the iris

recognition camera (Oda, col. 4 lines 28-46) and "[i]n the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990)" MPEP 2144.05.

29. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,267,085 to Sasaki et al in view of U.S. Patent Application Publication 2002/0135693 A1 to Ohkawara et al.

30. With respect to **claim 11 Sasaki** does not expressly disclose wherein the position sensor comprises one of an optical sensor or a contact sensor.

31. However, in analogous art, **Ohkawara** discloses, in Fig. 17-18, an optical sensor which is used to determine the position of a lens within a lens barrel (paragraphs 202-210). At the time the invention was made it would have been obvious to one of ordinary skill in the art to have used a optical sensor as taught by **Ohkawara** as the sensor for detecting the lenses disclosed by **Sasaki**, for doing so would provide a small and power efficient sensor, thus reducing the size and power consumption of the system.

32. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,267,085 to Sasaki et al in view of U.S. Patent 6,930,707 to Bates et al.

33. With respect to **claim 12 Sasaki** does not expressly disclose the lens barrel is used for an iris recognition camera in an iris recognition system.

34. In analogous art, **Bates** discloses, in Fig. 5, using a lens barrel for iris recognition (column 5 lines 32-52). As stated in **Bates** (column 10 lines 17-34) at the time the invention was made it would have been obvious to one of ordinary skill in the art to have

used the lens barrel of **Sasaki** for iris recognition as taught by **Bates**, for doing so would provide anti-theft or privacy implementation without adding any cost to the camera.

35. Claims 20 and 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2002/0135693 A1 to Ohkawara et al in view of U.S. Patent 6,930,707 to Bates et al in further view of U.S. Patent 5,267,085 to Sasaki et al.

36. With respect to **claim 20 Ohkawara** discloses, in Fig. 17-18, discloses, in Fig. 17-18, a method of operation for a camera, comprising: detecting a user (paragraph 75 and 191; where it is detected is a wide-angle lens is mounted when the signal is sent to the AF microcontroller 115 from detecting switch 123; thus, a wide-angle lens user is detected when the wide angle lens is attached); moving a camera lens (101 and 104) to an initial position detected by a position sensor (115) after the position sensor (115) detects the user (paragraph 75, 191 and 194; where the AF controller 115 controls the lenses to return to their respective predetermined positions after the wide angle user is detected from attaching the wide angle lens); thereafter reciprocatingly moving the camera lens (101 and 104) to perform both focus and zoom operations from the initial position to an image pickup location where a object can be captured (paragraph 203-205); and performing the image pickup using an image pickup device (paragraph 70-71; where it is inherent to capturing video signals to perform image pickup after focusing).

37. Ohkawara does not expressly disclose the camera is used as an iris recognition camera and where a user's iris is captured.

38. In analogous art, **Bates** discloses, in Fig. 5, using a lens barrel for iris recognition camera which is used to capture a user's iris (column 5 lines 32-52). As stated in **Bates** (column 10 lines 17-34) at the time the invention was made it would have been obvious to one of ordinary skill in the art to have used the lens barrel of **Ohkawara** for iris recognition as taught by **Bates**, for doing so would provide anti-theft or privacy implementation without adding any cost to the camera.

39. Additionally, neither Ohkawara nor Bates expressly disclose use of a single motor for both focusing and zooming.

40. However, **Official Notice** (MPEP § 2144.03) is taken that both the concepts and advantages of using a single drive motor to perform both a focus and zoom operation in a camera are well known and expected in the art. At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have used a single motor to perform both the focus and zoom operation as it would reduce the size of the lens unit, which allows for incorporation into more devices that require a small form factor.

41. **Examiner's note:** evidence of such a concept and advantage can be found in US Patent 6,011,657 to Labaziewicz which states in column 2 lines 25-38: "[i]t is an object of the present invention to provide a zoom mechanism that provides for zooming and focusing with a single motor while minimizing focusing lens travel".

42. Neither Ohkawara or Bates expressly disclose wherein the at least two lenses are respectively fixed to a predetermined position of the driving barrel so that an interval between any two lenses in the single alignment of the at least two lenses is immutable.

43. In analogous art **Sasaki teaches** a driving barrel (Fig. 4) configured to support a single alignment of at least one lens (L1 or L2) (column 7 line 43 through column 8 line 45; wherein a single alignment comprises moving the lens L1 and L2 to the proper position as indicated by a user determined zoom location through switch 32), wherein the at least two lenses are respectively fixed to a predetermined position of the driving barrel so that an interval between any two lenses in the single alignment of the at least two lenses is immutable (column 5 lines 15-18 and lines 25-27 and column 6 lines 22-23; where each group is inherently made up of two or more lenses to give a positive or negative refraction and each groups lenses are immutable with respect to each other as they are fixed within the holding frames); a moving device comprising a drive motors (Mz and Mf) configured to reciprocatingly move the driving barrel to perform both focus and zoom operations (column 5 lines 18-25, lines 32-34 and lines 59-61 and column 6 lines 1-3). Therefore, **Sasaki teach** wherein the at least two lenses are respectively fixed to a predetermined position of the driving barrel so that an interval between any two lenses in the single alignment of the at least two lenses is immutable.

44. As stated in Sasaki (column 9 line 66 through column 10 line 2) at the time the invention was made it would have been obvious to one of ordinary skill in the art to have used a structure as taught by **Sasaki** with moving the lenses of **Ohkawara in view of Bates**, for doing so would provide a zoom lens device of a two-lens grouped structure in which the zoom lens device is made compact and a zoom ratio is increased.

45. While the Examiner has relied upon the lenses groups of Sasaki to inherently comprising more than one lens and the claim to be fully anticipated by Sasaki, even if

said lens groups do not inherently comprise more than one lens (which the Examiner does not concede), it would be obvious to one of ordinary skill in the art to use more than one lens for the groups of Sasaki as positive and negative lens groups comprising more than one lens were well known and expected in the art at the time of Applicant's invention. Such can be evidenced by U.S. Patent 5,353,163 to Shibayama et al and U.S. Patent 5,541,772 to Lin which disclose positive and negative refractive lens groups with multiple lenses in each group (see abstracts)

46. With respect to **claim 22 Ohkawara** discloses wherein the image pickup device comprises a charge-coupled device (paragraph 70-71).

47. With respect to **claim 23 Ohkawara** discloses wherein the driving motor comprises a step motor (paragraph 66 and 69).

48. With respect to **claim 24 Ohkawara** discloses wherein the iris recognition camera further comprises a power transmission configured to transmit power for moving the camera lens (paragraph 66 and 69; where the step motors transmit power to move the lenses).

49. With respect to **claim 25 Sasaki** teaches controlling lens position through a transmission device including a lead screw (2) configured to be rotated by power from a driving motor (Mz), and rack screw (12) coupled to an outer circumference of lead screw (2) (Fig. 4 and column 5 line 23 through column 6 line 30; where the lens L2 is controlled via screw 12 which is coupled to the outer circumference of screw 2 via first holding frame 10 as seen in Fig. 4).

Conclusion

50. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL M. PASIEWICZ whose telephone number is (571)272-5516. The examiner can normally be reached on M-F 9:00AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571)272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DMP
November 12, 2009

/Sinh Tran/
Supervisory Patent Examiner, Art Unit 2622